

UNIQUE IDENTIFICATION (UID)



Unique Identification (UID) of Tangible Items

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Defense Standardization Program
Conference

Presented by: Rob Leibrandt
Deputy Program Manager, UID



DoD Vision for Unique Item Marking

To implement a policy establishing a strategic imperative for uniquely identifying tangible items relying to the maximum extent practical on international standards and commercial item markings and while not imposing unique government data requirements.

Uniquely identified (UID) tangible items will facilitate item tracking in DoD business systems and provide reliable and accurate data for management, financial, accountability and asset management purposes.



Unique Identification (UID) of Items is:

UID is . . .

. . . the set of data for tangible assets that is globally unique and unambiguous, ensures data integrity and data quality throughout life, and supports multi-faceted business applications and

EID 12V194532636

Orig. Part No. 1P1234

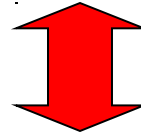
Serial No. S786950



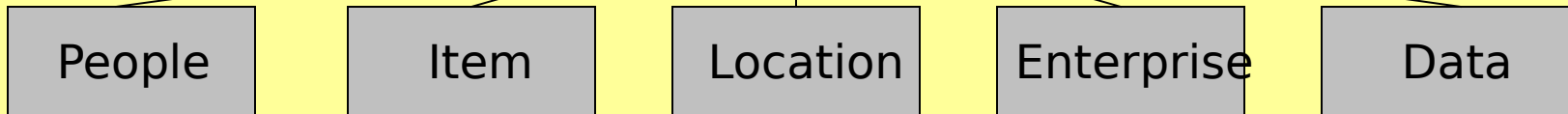


UID & Network Centric Collaboration

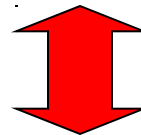
Industry



Unique
Identification



Network Centric Collaboration



U.S. Agencies & External Governments (e.g., UK, Australian, Canadian, Dutch)

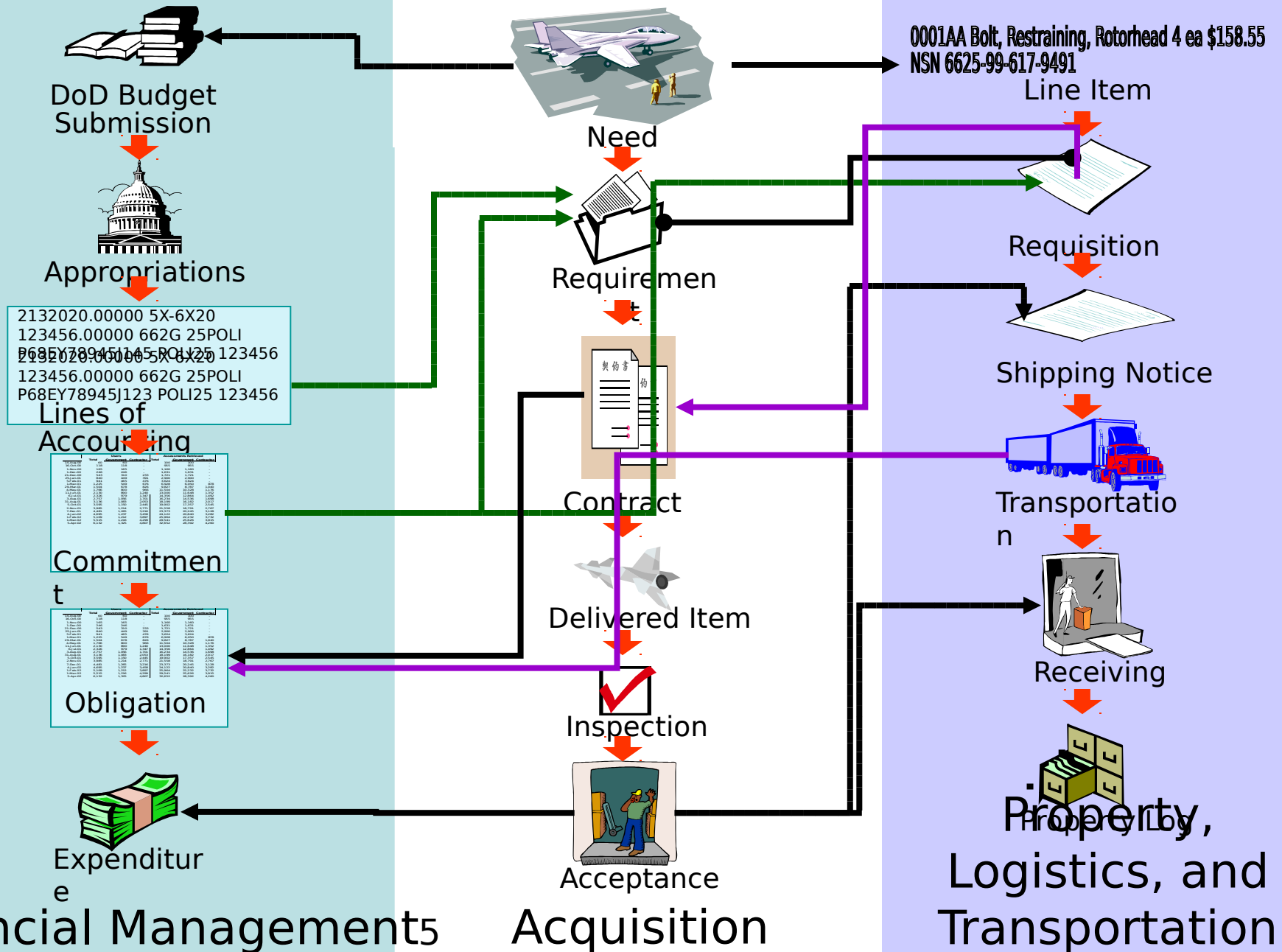
Enterprise UID Digital Data Flow Potential

The diagram illustrates the flow of digital data and documents across three main functional areas:

- Financial Management (Left, Light Blue):** Includes stages like DoD Budget Submission, Appropriations, Lines of Accounting, Commitment, Obligation, and Expenditure. It features a table of accounting lines and a stack of money icon.
- Acquisition (Center, Light Green):** Includes stages like Need, Requirement, Contract, Delivered Item, Inspection, and Acceptance. It features icons of an airplane, a folder, a contract, a jet, and a warehouse.
- Property, Logistics, and Transportation (Right, Light Purple):** Includes stages like Line Item, Requisition, Shipping Notice, Transportation, Receiving, and Property. It features a line item text, document icons, a truck, a person receiving a box, and a warehouse icon.

Key data flows and document types shown include:

- Financial Data:** A table of accounting lines with columns for various identifiers and amounts.
- Line Item Example:** 0001AA Bolt, Restraining, Rotorhead 4 ea \$158.55, NSN 6625-99-617-9491
- Document Types:** Requisition, Shipping Notice, Contract, Delivered Item, Inspection, Acceptance.

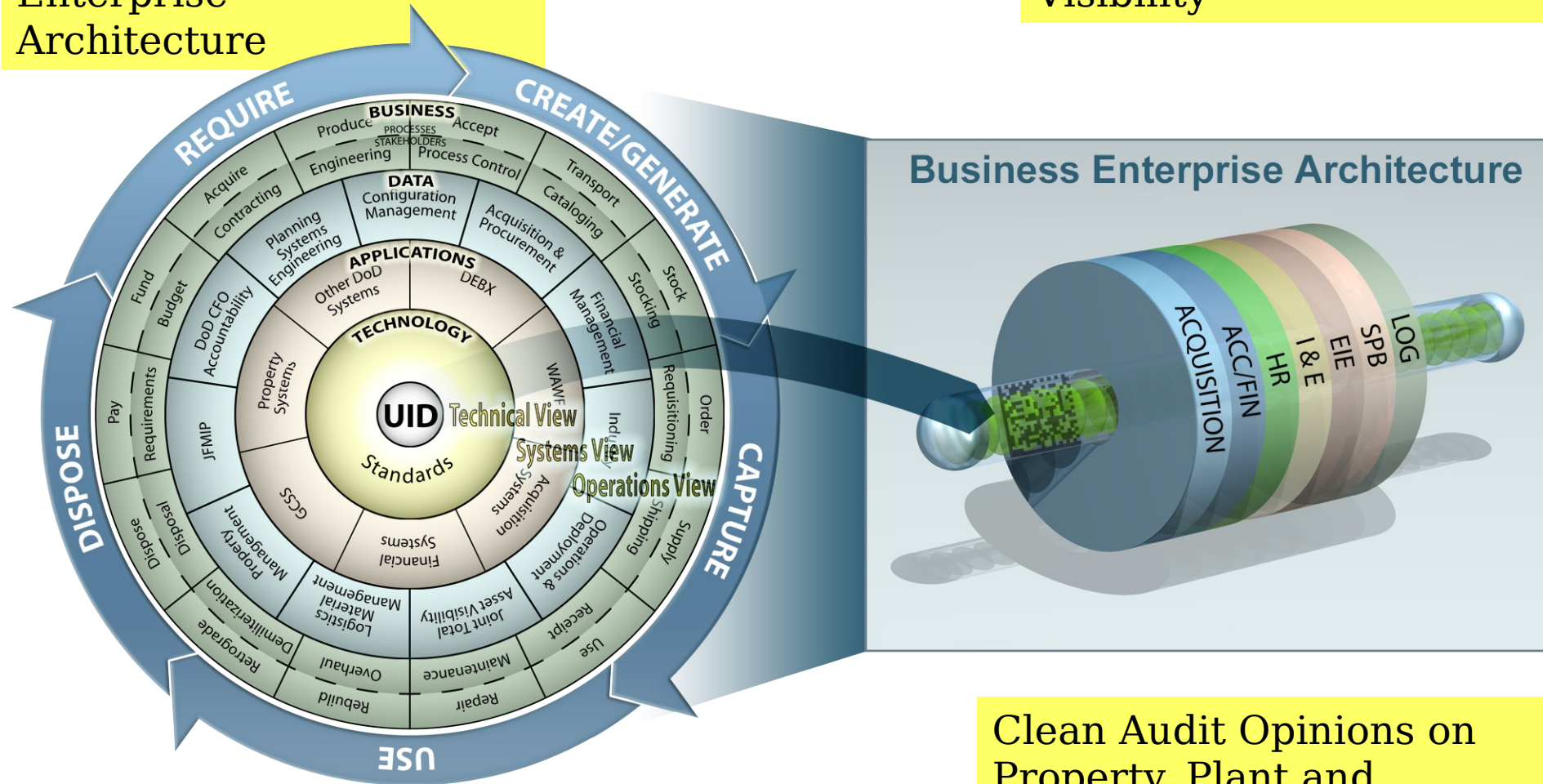




UID Role - Business Enterprise Architecture

Enhance the Business Enterprise Architecture

Enhance Total Asset Visibility



Clean Audit Opinions on Property, Plant and Equipment & Operating



Defining the Scope of UID

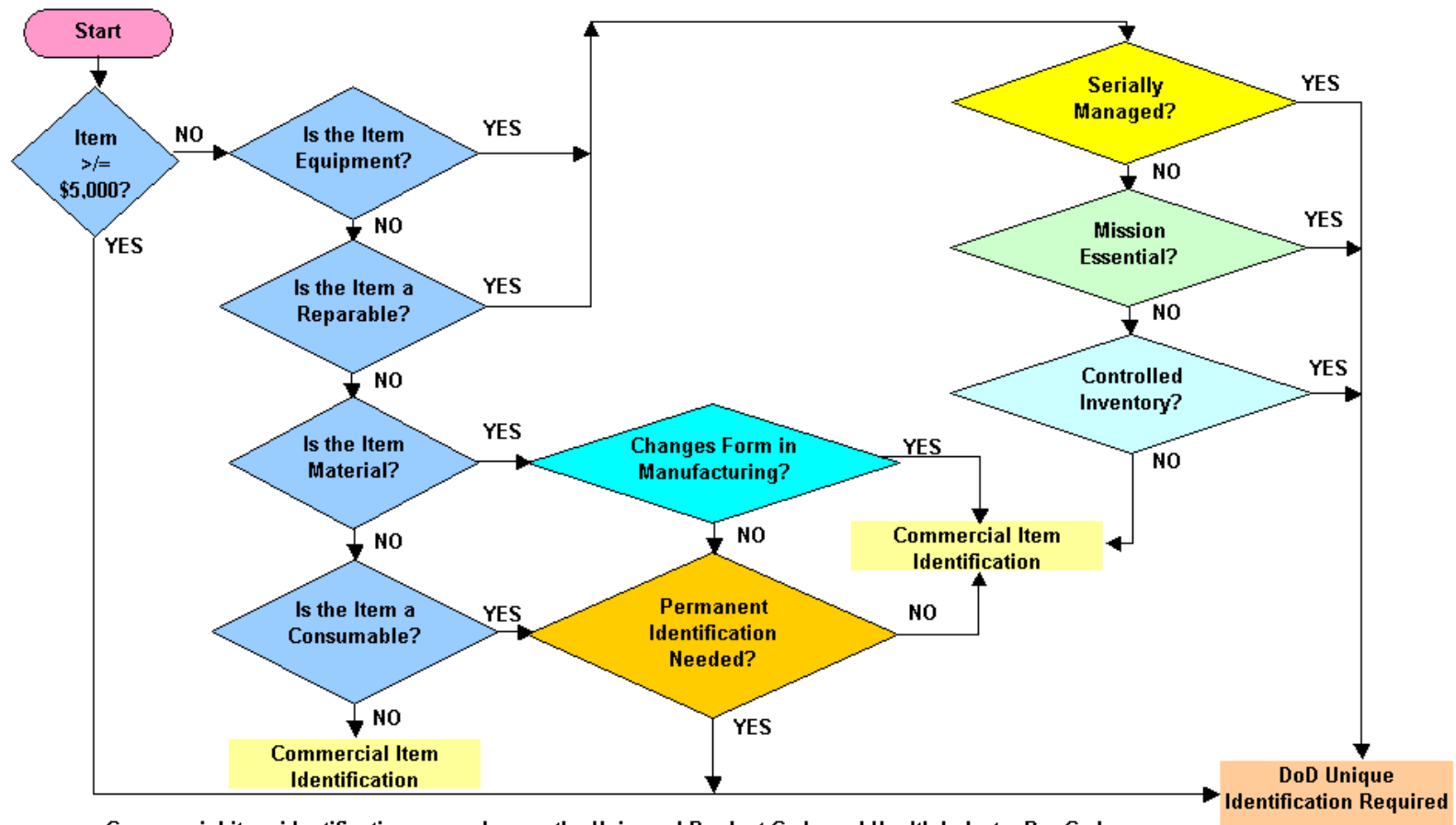


A UID Is	A UID Is Not
<ul style="list-style-type: none">✓ A Data Element✓ A Unique Identifier for an Item✓ Globally Unique✓ Unambiguous✓ Permanent✓ Created by Concatenating Specific Data Elements	<ul style="list-style-type: none">✓ A Device for Communicating Data, such as Radio Frequency Identification (RFID) Tags, Contact Memory Buttons, Linear Bar Codes, or 2-D Data Matrices✓ A Replacement for the National Stock Number✓ Intelligent Data that Yields Information About the Item



Require the UID

Which Items Require a Unique Identifier





Create and Generate the UID

BUSINESS RULES

- The UID shall be derived from its discrete component data elements. The UID is not required to be marked on the item as a separate data element.*

UID Construct

#1¹

EID 17V0CVA5



Serial No.
S786950

UID Construct #1

D1 0CVA5786950

IAC CAGE + Serial

No.

UID Construct

EID

12V194532636



Orig. Part No. 1P1234

Serial No.
S786950

UID Construct #2

UN194532636123478

IAC DUNS Orig. Serial
Part No. No.

¹ This example uses MH10.8.2 Data Identifiers.

*If the enterprise chooses to mark the UID as a discrete data element on the item, the component data elements must also be marked on the item as discrete data elements, in addition to the UID.



UID Collaborative Solution Issue

- Using the **syntax** of ISO/IEC 15434, the collaborative solution provides for three interoperable formats:

Formats:

(2-digit numeric format code requested of SC 31 to replace DD)

Text Element Identifiers:

[>^R_S**DD**^G_S**MFR** 0CVA5^G_S**SER** 674A36458^R_S**EO**^T

EAN.UCC: Application Identifiers

[>^R_S**05**^G_S**8004**06141411A0B9C3D6^R_S**EO**^T

MH 10.8.2: Data Identifiers

[>^R_S**06**^G_S**17V**0CVA5^G_S**1P**1234^G_S**S**786950^R_S**EO**^T

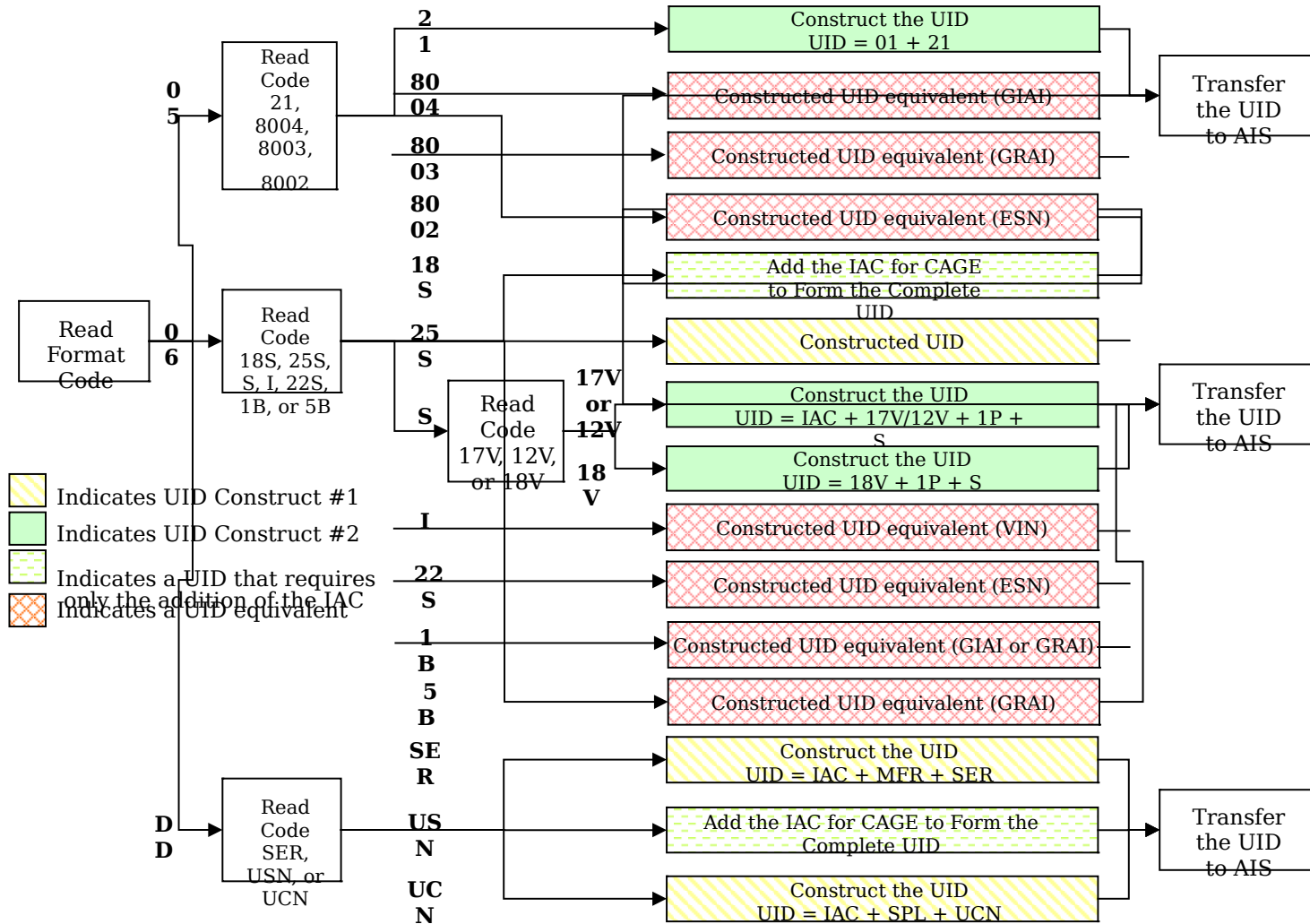


EID	17V0CVA
	5
Original Part Number	1P1234
Serial Number	S786950

- Until SC 31 assigns a format code for use of TEIs use interim DoD format code “DD” in ISO/IEC 15434 syntax



Interoperable UID Programming Algorithm (1st DRAFT)

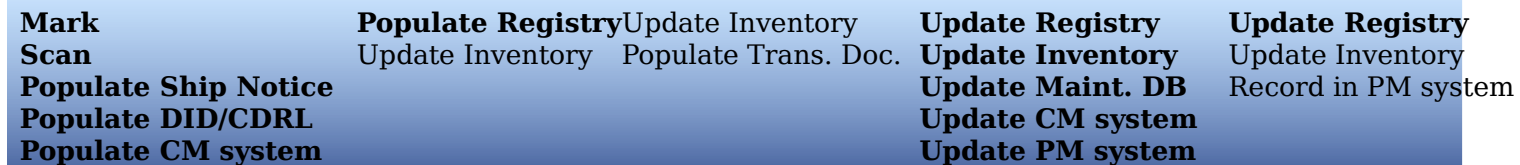
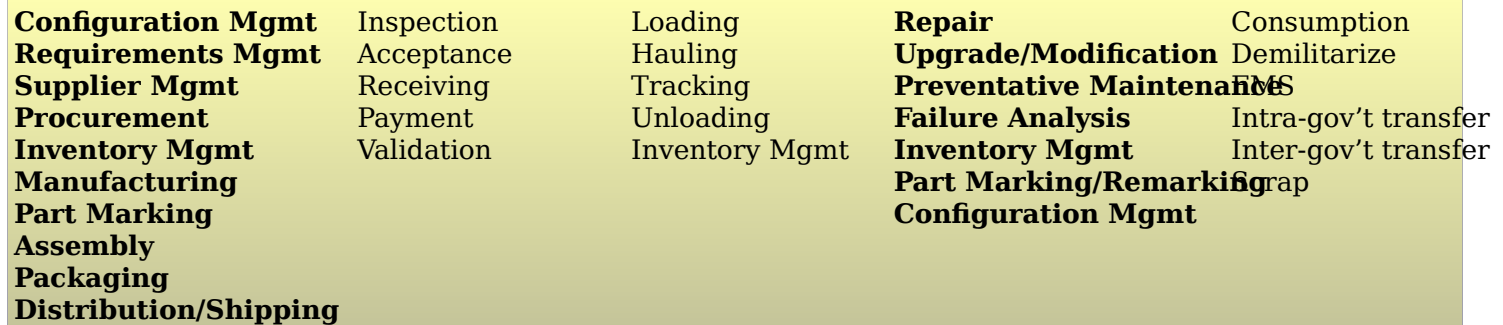
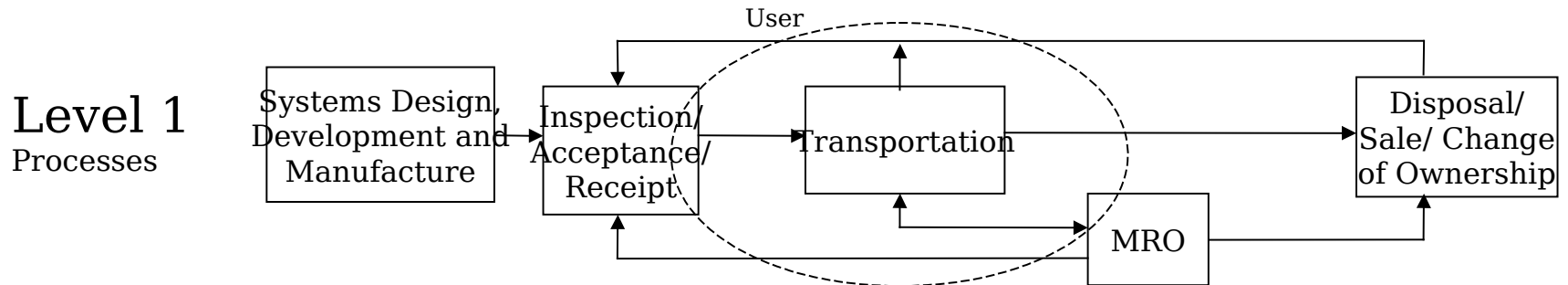


Issue: AIT devices/Computers must be able to distinguish between formats.

Impact: Interoperable reading of a



Leveraging UID Data Capture/Use





Use Cases

- Failure Reporting/Analysis & Targeted Repair (Reactive and Predictive)
- Recall or Latent Defect Resolution
- Maximizing Capability While Minimizing Logistics
 - Reliability studies to determine best equipment available
 - Tracking and redirecting as necessary in route
- Planned Maintenance
- Repair
- Supplier Performance
 - Parts (end items and spares)
 - Logistics support



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graph LR; CA[Contract Award] --> D1[Determine what items need to be marked]; D1 --> D2[Determine mark method and location]; D2 --> CMBOM[Create MBOM and MPP]; CMBOM --> MI[Make Item]; MI --> FI{Functional Inspect}; MI -.-> RI[Record UID, Integrate into end Product]; RI --> FI; FI -.-> S[Ship, DD250]; S --> FID{Final Inspection}; FID --> S; FID --> RUID[Record UID Data Delivery Requirements]; RUID --> MISC[Mark Item, Capture UID(s)]; MISC --> BUI[Buy Item]; BUI --> SOW[Subcontract SOW with UID Requirements]; SOW --> RIT[Receive Inspect & Store]; RIT --> RST[Retrieve from Stock]; RST --> RI; FID -.-> RIT; FID -.-> RST; FID -.-> RI; FID -.-> SOW; FID -.-> BUI; FID -.-> CA;
```

Contract Award

Determine what items need to be marked

Determine mark method and location

Create MBOM and MPP

Make Item

Functional Inspect

Buy Item

Subcontract SOW with UID Requirements

Receive Inspect & Store

Retrieve from Stock

Record UID, Integrate into end Product

Mark Item, Capture UID(s)

Record UID Data Delivery Requirements

Final Inspection

Ship, DD250

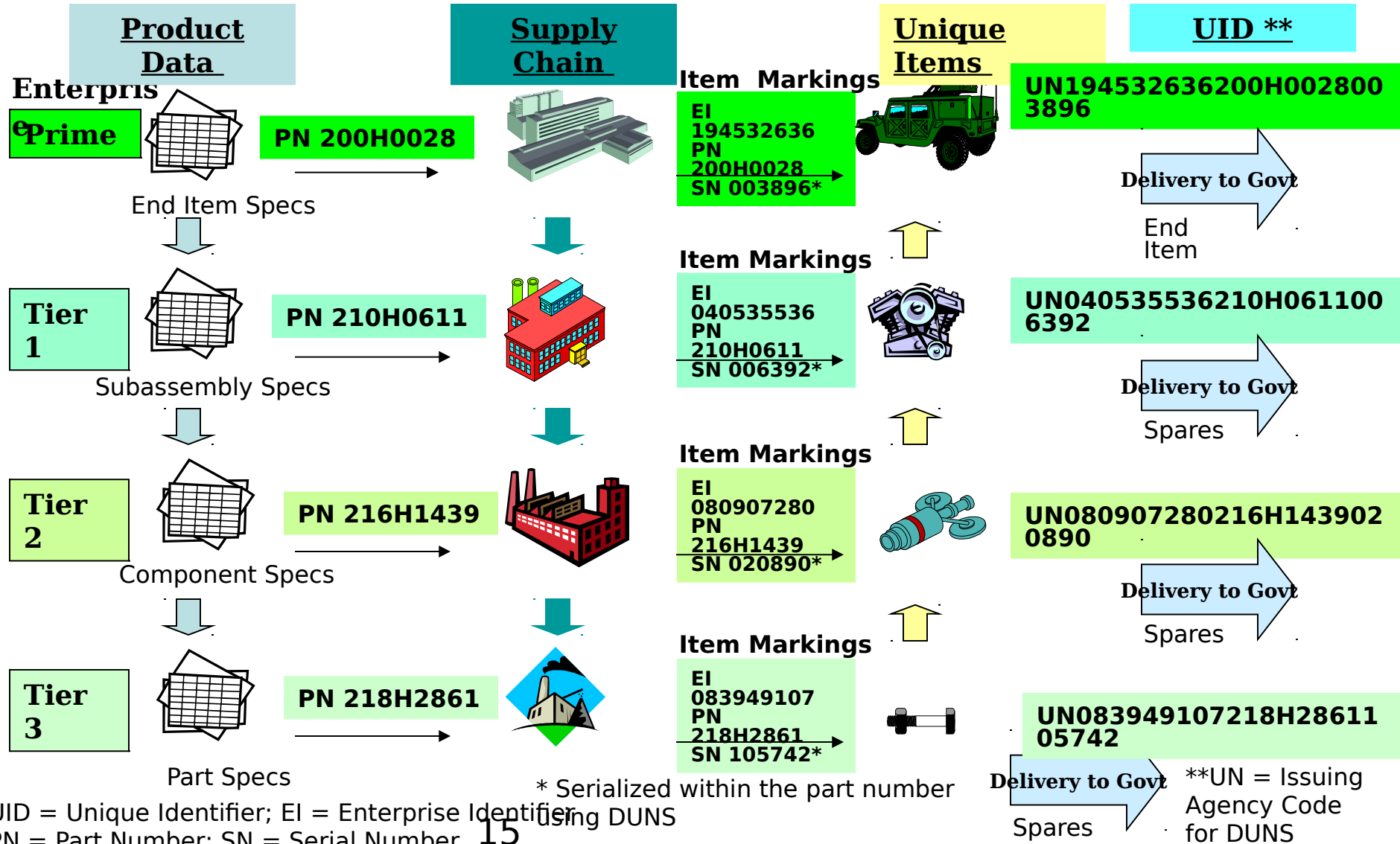
MBOM – Manufacturing Bill Of Materials
MPP – Manufacturing Process Planning

Issue: Existing marking processes must be able to accommodate UID requirements.

Impact: Existing investments in marking infrastructure are leveraged.



UID in the Supply Chain





UID Registry

The UID registry will serve as an acquisition gateway to...

- Identify what the item is
- Identify who owns the item originally
- Identify the initial value of the item
- Identify procuring activity and acceptance timing
- Intersect with other systems (e.g., property management, logistics, inventory management)
- **Enable chaos; embrace multiple UID equivalents; allow multiple standards to thrive**

The UID registry will not...

- Track where¹⁶ the item is



UID “Pedigree” Data

End Item Data (15)

- ◆ UID (Concatenated) ←
- ◆ Descriptive Data
 - UID Data Elements (5)
 - Item Description
 - Unit of measure
- ◆ Acquisition Data
 - Contractor
 - Contract Number
 - CLIN/SLIN/ELIN
 - Price
 - Acceptance Code (identifies acceptor)
 - Acceptance Date
 - Ship to code

Embedded Items of End Items (10)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
 - UID Data Elements (5)
 - Item Description
 - Unit of measure
- ◆ Parent UID as of delivery date
- ◆ GFP flag

Item Tracking (TBD)

- ◆ Current parent
- ◆ “As of” date



WAWF with UID



Contractor
Document Creation



EFT

DFAS Pay
Systems

DFAS Accounting
Systems

DCMA Office
Source Inspection &
Acceptance

Receiving Activity
Destination
Acceptance

Local Processing
Document
Certification

Pay Official
Payment Processing



ANSI
X12















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